



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,962	02/21/2006	Masanori Masuda	DK-US055309	8550
22919	7590	11/06/2007	EXAMINER	
GLOBAL IP COUNSELORS, LLP			DUFF, DOUGLAS J	
1233 20TH STREET, NW, SUITE 700			ART UNIT	PAPER NUMBER
WASHINGTON, DC 20036-2680			3748	
MAIL DATE	DELIVERY MODE			
11/06/2007	PAPER			

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/568,962	MASUDA, MASANORI
	Examiner Douglas J. Duff	Art Unit 3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-11 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 21 February 2006 is/are: a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date: _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date <u>2/21/06</u> .	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Drawings

1. Figures 12-14 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3 and 6-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Barito (US 4992032). Regarding claim 1, Barito discloses a rotary compressor, comprising a compression mechanism including a cylinder (between 10 and 11) having a cylinder chamber (inside 10-1 and 11-1), a piston (10-1) accommodated in the cylinder chamber eccentrically with respect to the cylinder (11-1), and a blade (inside edge of 10-1 near discharge, Fig. 1) arranged in the cylinder chamber and defining the cylinder chamber into a first chamber (B) and a second chamber (A), at least one of the

cylinder and the piston rotating eccentrically as an eccentric rotation body (Fig. 4), a drive shaft (col. 1, line 26) configured for driving the compression mechanism; a pressing mechanism (23) configured for bringing a cylinder side end plate (10), which is provided at one end in an axial direction of the cylinder chamber and faces an end face in an axial direction of the piston (Fig. 4), and a piston side end plate (11), which is provided at the other end in the axial direction of the cylinder chamber and faces an end face in an axial direction of the cylinder (Fig. 4), close to each other in an axial direction of the drive shaft (Fig. 4); and a casing (attached to 11) configured for accommodating the compression mechanism, the drive shaft, and the pressing mechanism the pressing mechanism (23) being eccentric away from the a center of the cylinder side (10) or the piston side end plate of the eccentric rotation body (see left and right side of 23, Fig. 4) and the pressing mechanism generating an axial-direction pressing force with a center of the pressing mechanism being eccentric away from a center of the drive shaft (as 10 orbits to left of Fig. 4, 23 must be shown to maintain eccentricity relative to center of drive shaft bore at bottom of Fig. 4).

4. Regarding claims 2 and 3, Barito discloses the rotary compressor of claim 1, wherein the cylinder chamber has a circular shape (Fig. 1) when viewed perpendicularly from the axial direction, and the piston is substantially circular (Fig. 1) and the cylinder chamber has an annular shape when viewed perpendicularly from the axial direction (Fig. 1), and the piston includes a substantially annular piston arranged in the cylinder chamber (10-1) and defining the cylinder chamber into an outer cylinder chamber (B) and an inner cylinder chamber (A).

5. Regarding claims 6-8, Barito discloses the compressor of claim 1 including the pressing mechanism having a support plate (30) that is arranged along a side of the cylinder side (10) or the piston side end plate of the eccentric rotation body, a sealing ring (23) for defining a first opposing section between the cylinder side or the piston side end plate and the support plate on an inner side in a radial direction (inside 23, Fig. 4) and a second opposing section between the cylinder side end plate and the support plate on an outer side in the radial direction (outside of 23), the sealing ring is arranged eccentrically away from a center of the eccentric rotation body (shown in Fig. 4) in one of the cylinder side end plate (10), the piston side end plate of the eccentric rotation body and the support plate and the pressing mechanism allows a fluid pressure discharged outside the compression mechanism (10-5) to work on the first opposing section, the sealing ring fitted in an annular groove (16-2) formed in one of the eccentric rotation body (10) and the support plate, the cylinder has a slit (16-2) formed in a portion (Figs. 3, 4) eccentric from a center of the eccentric rotation body in a face portion opposite (bottom side) a face on a cylinder chamber side of the cylinder side end plate (10) of the eccentric rotation body and the pressing mechanism allows pressure of fluid discharged outside the compression mechanism to work on the slit (10-4).

6. Regarding claims 9-11, Barito discloses the rotary compressor of claim 1, wherein the cylinder side has a groove (16-2) and a through hole (10-4), the groove formed in a portion eccentric from the a center of the eccentric rotation body on a face opposite a face on a cylinder chamber side of the end plate (bottom side) of the eccentric rotation body (10) and the through hole formed in the cylinder side end plate

(10) for allowing the groove to communicate with the cylinder chamber and the pressing mechanism introduces a portion of fluid compressed in the cylinder chamber into the groove through the through hole to allow the a pressure of the fluid to work on the groove (Fig. 4), a sealing mechanism (tip where 10-1 meets 11) arranged to prevent leakage of fluid in at least one of a first axial direction gap between an end face in the axial direction of the cylinder and the piston side end plate and a second axial direction gap between an end face in the axial direction of the piston and the cylinder side end plate, the sealing mechanism includes a chip seal (Background, 131 of Shaffer, U.S. 3994633) provided at least one of the first axial direction gap and the second axial direction gap.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barito in view of Fox (US 2073101). Barito discloses the compressor of claim 3, but fails to disclose the piston has a gap dividing the piston into a C-shape with a swing bushing slidably held in the gap and forming a blade groove configured for holding the blade so as to allow the blade to move back and forth in the swing bushing and the blade is in a blade groove so as to extend from a wall face on an inner peripheral side to a wall face on an outer peripheral side of the annular cylinder chamber, a plurality of

Art Unit: 3748

discharge ports for discharging fluid in the cylinder chamber to an outside of the compression mechanism.

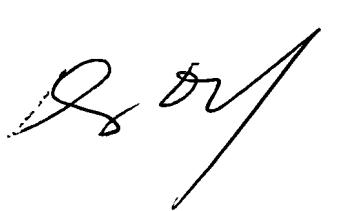
9. Fox teaches a compressor with a piston having a gap dividing the piston into a C-shape with a swing bushing (Fig. 11) slidably held in the gap (Figs. 13, 14) and forming a blade groove (51, 51) configured for holding the blade so as to allow the blade to move back and forth in the swing bushing and the blade is in a blade groove so as to extend from a wall face (R, Fig. 1) on an inner peripheral side (inside R) to a wall face on an outer peripheral side (outside R) of the annular cylinder chamber (IC), a plurality of discharge ports (C, D) for discharging fluid in the cylinder chamber to an outside of the compression mechanism. It would have been obvious for a person having ordinary skill in the art at the time the invention was made to utilize a compressor of the above description in order for fluid pressure to be admitted to simultaneously work in two chambers, resulting in the continuous application of fluid pressure to the chambers so there is no dead center in the prime mover (col. 1, lines 45-53).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas J. Duff whose telephone number is (571) 272-3459. The examiner can normally be reached on M-F 7 AM - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Douglas J. Duff

 11/1/07


THOMAS DENION
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700